

October 14, 2009

Ms. Waverly Seward Manager of Pension Administration Shelby County Government 160 North Main Street, 9<sup>th</sup> Floor Memphis, TN 38103

Re: Proposed Plan B COLA

Dear Waverly:

Per your request, we have determined the actuarial impact to the Shelby County Retirement System if a Cost-of-Living Adjustment (COLA) is provided to certain Plan B retirees, survivors, and disabled participants. The current cost-of-living schedule is based on the annual change in the Consumer Price Index (CPI) that is published each September. Our assumption for the annual CPI increase is based on a long-term inflation rate of 2.5% that is included in the valuation assumptions.

The proposed COLA is the same as the Cost-of-Living Adjustment provision in Plans A and C, with the exception that the increases are only provided on January 1, 2010, January 1, 2011 and January 1, 2012. The retirement benefit remains level after three years.

The conditions for receipt of the COLA are as follows:

A maximum of 4% annual adjustment based on CPI changes applies to the following benefits:

- a. Retired participants after age 65
- b. Disabled participants
- c. Temporary survivor benefits for dependent children and spouses
- d. Permanent survivor benefits for spouses over age 65



October 14, 2009 Ms. Waverly Seward Page 2

In no event, however, will the Plan B benefits exceed 100% of final average pay except as follows for an employee who retires with 40 or more years of service.

Monthly	Maximum			
Final Average	Benefit			
Earnings (FAE)	(% of FAE)			
Less than \$1,200	124%			
\$1,200 to \$2,800	115%			
More than \$2,800	106%			

We have based this cost analysis on our preliminary valuation results as of July 1, 2009. In Plan B, there are a total of 1,265 participants receiving benefits, 51 active participants and 6 terminated with deferred benefits. To determine the cost impact, we calculated the present value of the future benefit increases and amortized this amount over a 10-year period.

We have assumed that the increase in the CPI applicable for the 2010 COLA will be 0%. Assuming that a 2.5% COLA is granted on January 1, 2011 and on January 1, 2012, the additional contribution required by the Retirement System is estimated to be \$1.1 million each year for the next ten-year period.

Of course if the actual COLA granted for those two years is greater than 2.5%, the actual contribution will be greater. For comparison, if a 3.0% COLA is granted for 2011 and 2012, the additional contribution that would be required by the Retirement System is estimated to be \$1.3 million each year over a ten-year period.

Please let us know if you have any questions or need any additional information.

Sincerely,

Edward Koebel, EA, FCA, MAAA

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Senior Actuary

EK/CT:kc

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October 15, 2009

Ms. Waverly Seward Manager of Pension Administration Shelby County Government 160 North Main Street, Suite 950 Memphis, TN 38103

Subject: Potential 2010 COLA for Plan A and Plan C

Dear Waverly:

Each year the Cost-of-Living Adjustment (COLA) for Plan A and Plan C participants is determined by the increase in the September CPI-U. The CPI-U for September, 2008 was 218.78 and for September, 2009 was 215.97. This represents a decrease of 1.3%. Since the CPI-U amount has decreased for this year, each participant defined in Section 7.5 of Plan A and Plan C are not entitled to receive an increase in their benefit payment effective January 1, 2010.

If you have any questions or would like to discuss this further, please call.

Sincerely,

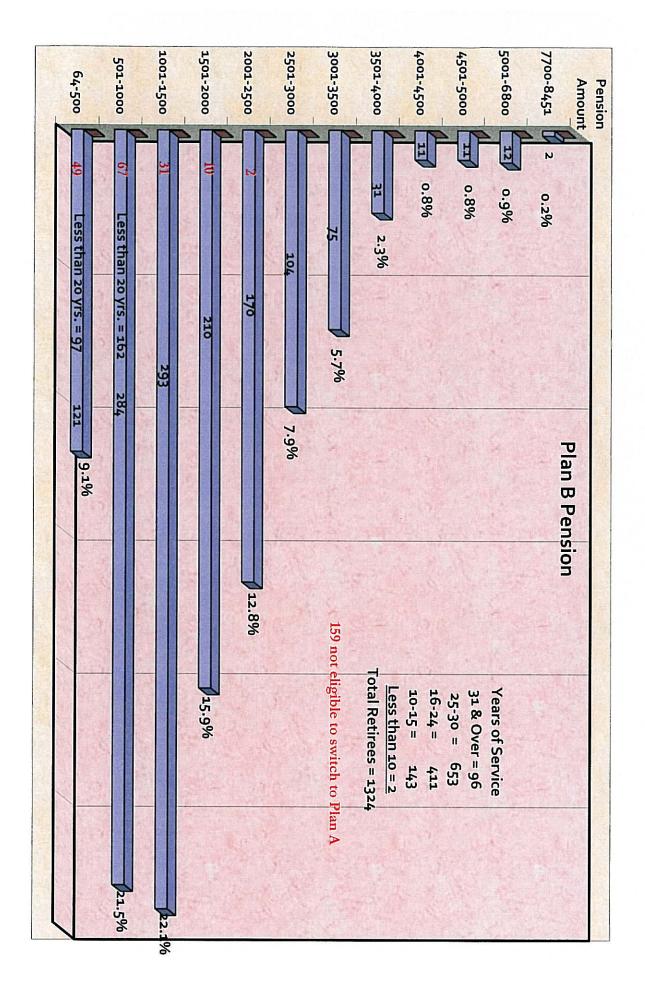
Edward J. Koebel, EA, FCA, MAAA

Edward J. Kochel

Senior Actuary

EJK:kc

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## **COST OF LIVING ADJUSTMENTS**

YEAR	ACTIVE EMPLOYEES	PLAN B RETIREES	PLAN A COLAS		
1998	4.00%	2.30%	2.20%		
1999	\$101 general adjustment to base pay	1.70%	1.50%		
2000	3.00%	0.04%	2.60%		
2001	3.00%	3.50%	3.50%		
2002	3.00%	2.60%	2.60%		
2003	0.00%	Bonus	1.50%		
2004	2.00%	Bonus	2.30%		
2005	3.00%	Bonus	2.50%		
2006	3.00%	Bonus	4.00%		
2007	3.00%	Bonus	2.10%		
2008	0.00%	Bonus	2.80%		
2009	0.00%	0.00%	4.00%		

- 2.3% given to retirees over age 65 and retired 5 or more years Cost \$192,591 per year present value \$1,926,095 increased County's contribution from 9.29% to 9.40%
- 1.7% given to retirees over age 65 and retired 5 or more years Cost \$151,263 per year present value \$1,498,270 increased County's contribution from 6.39% to 6.47%
- 2000 0.4% given to 1,100 retirees over 65 & retired 5 or more years Cost \$42,460 per year present value \$363,025 increased County's contribution from 6.88% to 6.97%. Average retiree monthly increase was \$4.00.
- 3.5% given to disabled retirees & survivors of disability retirees who survivors were age 62 or older as of 7/1/01; retirees at least age 62 on 7/1/01 who retired prior to 2/1/80 and survivors of retirees who retired prior to 2/1/80 provided the survivor was age 62 or older as of 7/1/01. 3% given to retirees & survivors of retirees who began receiving benefits on or after 2/1/80 & at least age 65 or older as of 7/1/01. Cost \$408,000 per year present value \$3,900,000 increased County's contribution by 0.18%.
- 2.6% given to retirees and survivors age 62 and older on 7/1/02 who began receiving pensions on or after 2/1/80;; given to disabled retirees regardless of age and to survivors of disabled retirees who are at least age 62 as of 07/1/2002. Cost \$410,000 per year present value \$2,450,000 increased County's contribution by 0.17%.
- A one-time bonus was given to Plan B retirees and their survivors who were age 65 or older on or after November 4, 2003 and living as of December 15, 2003, disability retirees and their survivors regardless of age and dependent children. Retirees received \$10.00 per year of pension credit, however, disabled retirees and their survivors were deemed to have exactly 25 years of pension credit. Total cost not to exceed \$250,000.00.

- A one-time bonus was given to Plan B retirees and their survivors who were age 65 or older on or after November 1, 2004 and living as of November 15, 2004, disability retirees or their survivors regardless of age, and dependent/handicapped children. Retirees received \$10.00 per year of pension credit, however, disabled retirees and their survivors were deemed to have exactly 25 years of pension credit. Total cost not to exceed \$250,000.00.
- A one-time bonus was given to Plan B retirees and their survivors who were age 65 or older on or after November 1, 2005 and living as of November 15, 2005, disability retirees or their survivors regardless of age, and dependent/handicapped children. Retirees received \$10.00 per year of pension credit, however, disabled retirees and their survivors were deemed to have exactly 25 years of pension credit. Total cost not to exceed \$250,000.00.
- A one-time bonus was given to Plan B retirees and their survivors who were age 65 or older on or after November 1, 2006 and living as of November 15, 2006, disability retirees or their survivors regardless of age, and dependent/handicapped children. Retirees received \$10.00 per year of pension credit, however, disabled retirees and their survivors were deemed to have exactly 25 years of pension credit. Total cost not to exceed \$250,000.00.
- A one-time bonus was given to Plan B retirees and their survivors who were age 65 or older on or after November 1, 2007 and living as of November 15, 2007, disability retirees or their survivors regardless of age, and dependent/handicapped children. Retirees received \$15.00 per year of pension credit, however, disabled retirees and their survivors were deemed to have exactly 25 years of pension credit. Total cost not to exceed \$350,000.00. Actual cost \$343,305.00.
- A one-time bonus was given to Plan B retirees and their survivors who were age 65 or older on or after November 1, 2008 and living as of November 15, 2008, disability retirees or their survivors regardless of age, and dependent/handicapped children. Retirees received \$15.00 per year of pension credit, however, disabled retirees and their survivors were deemed to have exactly 25 years of pension credit. Total cost not to exceed \$350,000.00. Actual cost \$339,870.00



## CONFIDENTIAL

April 2, 2001

Ms. Waverly Seward Manager of Retirement Shelby County Government 160 N. Mid-America Mall, Suite 950 Memphis, Tennessee 38103

RE: Cost-of-Living Increase for Plan B

Dear Waverly:

At the last Retirement Board meeting, the Mayor asked me to compare benefits in Plan B and Plan A and to consider the employee contributions required in Plan B.

Exhibits I and II compare Plan B with Plan A for an employee who retires at age 55 with 25 years of service. Plan A benefits are projected in Exhibit I using the maximum 4% per year COLA after age 65, and in Exhibit II using 3% per year COLA after age 65. (The average Plan A COLA to date has been 3.1%.) Column (1) is the actual Plan B retirement benefit. Column (2) is the Plan B net retirement benefit, which is the benefit reduced by the employee paid portion. We assumed that the employee's salary has increased 6% per year over the employee's service and that these contributions earned 8.25% interest per year in the fund.

Ignoring any ad-hoc increases which may be recommended by the Retirement Board (averaging 2.4% per year for 1995-1999), the present value of the actual Plan B benefit is \$290,000. The present value of the Plan B net benefit is \$174,000. Under Plan A (4% COLA) the present value is \$197,000 if the employee elects early retirement or \$105,000 if he or she defers receiving benefits until age 65. Under Plan A (3% COLA) the present value is \$191,000 if the employee elects early retirement or \$99,000 if he or she defers receiving benefits until age 65. Once the employee paid portion of the Plan B benefit is removed, the Plan B present value is in between the two Plan A benefits.

These Exhibits are based on the employee's benefit only. As noted at the bottom of each Exhibit, the surviving spouse benefit adds 12% to the value of Plan B and 7% to the value of Plan A if the employee is married.



The present values are based on the interest rate used in the last actuarial valuation report and the 1983 Group Annuity Mortality table. The 8.25% interest rate is used to discount future benefit payments to the present. The 1983 Group Annuity Mortality table is used to estimate life expectancy or how long payments will be made.

The comparison will be different depending on the age and service of the employee at retirement. If we need to develop other examples, please let me know.

Sincerely,

Karen W. Buckner, A.S.A.

Zaren Bucken

KWB/kst

Attachments

Exhibit I

## Comparison of Plan B and Plan A Retirement Benefits Age 55; 25 years of service; 3 year average pay = \$42,000/yr. = \$3,500/mo. Plan A COLA 4% per year

8	Plan B				Plan A				
	(1)		and the same of th	(2)		(3)		(4)	
		etirement		Retirement	Early Retirement		Deferred Retirement		
Age	Benefit		Benefit ***		Benefit		Benefit		
55	\$	2,363	\$	1,418	\$	1,444	\$		
56	\$	2,363	\$ \$ \$ \$ \$ \$	1,418	\$	1,444	\$	5 <b>4</b> 1	
57	\$.	2,363	\$	1,418	\$	1,444	\$		
58	\$	2,363	\$	1,418	\$	1,444	\$	-	
59	\$	2,363	\$	1,418	. \$	1,444	\$	-	
60	\$	2,363	\$	1,418	\$	1,444	\$		
61	\$	2,363	\$	1,418	\$	1,444	\$	=	
62	\$	2,363	\$	1,418	\$	1,444	\$		
63	\$	2,363	\$	1,418	S	1,444	\$	-	
64	\$	2,363	\$ \$ \$ \$ \$ \$	1,418	\$ \$ \$ \$ \$	1,444	\$	(# <b>=</b>	
65	\$	2,363 *	\$	1,418	\$	1,444	\$	1,925	
66	\$	2,363	\$	1,418	\$	1,502	\$	2,002	
67	\$	2,363	\$ \$ \$	1,418	\$	1,562	\$	2,082	
68	\$	2,363	\$	1,418	\$	1,624	\$	2,165	
69	\$	2,363	\$	1,418	.\$	1,689	\$	2,252	
70	\$	2,363	\$	1,418	\$	1,757	\$	2,342	
71	\$	2,363	\$	1,418		1,827	\$	2,436	
72	\$	2,363	\$	1,418	\$ \$	1,900	\$	2,533	
73	\$	2,363	\$ \$	1,418	\$	1,976	\$	2,634	
74	\$	2,363	\$	1,418	\$	2,055	\$	2,740	
75	\$	2,363	\$	1,418	\$	2,137	\$	2,849	
76	\$	2,363	\$	1,418	\$	2,223		2,963	
77	\$	2,363	\$ \$ \$	1,418	\$ \$ \$	2,312	\$ \$	3,082	
78	\$ .	2,363	\$	1,418	\$	2,404	\$	3,205	
79	\$	2,363	\$	1,418	\$	2,501	\$	3,333	
Present Value									
at age 55: **	\$	290,000	\$	174,000	\$	197,000	\$	105,000	

 <sup>\*</sup> Ad-hoc COLA increases may be granted at age 65 and later, depending on investment return.
 \*\* Assumptions: 8.25% interest and 1983 GAM mortality for males

Note: Surviving Spouse benefit increases value by 12% for Plan B and 7% for Plan A.

<sup>\*\*\*</sup> Plan B benefits net of benefit attributable to contributions by employees equal to 8% of pay and accumulated at 8.25% interest per year.

## Comparison of Plan B and Plan A Retirement Benefits Age 55; 25 years of service; 3 year average pay = \$42,000/yr. = \$3,500/mo. Plan A COLA 3% per year

	Plan B					Plan A			
	R	(1) etirement		Net	(2)	Early	(3)	(4)	
Age		Benefit		Net Retirement Benefit ***		Early Retirement Benefit		Deferred Retirement Benefit	
55	\$	2,363		\$	1,418	\$	1,444	\$	
56	\$	2,363		\$	1,418	\$	1,444	\$	
57	\$	2,363		\$ \$ \$	1,418	\$	1,444	E.	) <del>-</del>
58	\$	2,363		S	1,418	\$	1,444	E.	: <b>-</b>
59	\$	2,363		\$ .	1,418	\$	1,444	\$ \$ \$	-
60	\$	2,363		¢	1,418	œ	4 444	œ.	
61	\$	2,363		\$ \$	1,418	\$	1,444	\$	7 <del>4</del> 5
62	\$	2,363		\$	유민들이 맛 있었습니다.	\$	1,444	\$	=
63	\$	2,363		ς. Ψ	1,418	\$	1,444	\$	•
64	φ \$			\$ \$	1,418	\$	1,444	\$	
04	φ	2,363		Ф	1,418	\$	1,444	\$	8 <b></b> .
65	\$	2,363	•	<b>\$</b>	1,418	\$	1,444	\$	1,925
66	\$	2,363	80	\$	1,418	\$	1,487	\$	1,983
67	\$	2,363		\$	1,418	s s s	1,532	\$	2,042
68	\$	2,363		\$	1,418	\$	1,578	\$	2,103
69	\$	2,363		\$	1,418	\$	1,625	\$	2,167
70	\$	2,363		\$	1,418	\$	1,674	\$	2,232
71	\$	2,363		\$	1,418	S	1,724	\$	2,299
72	\$	2,363		\$	1,418	\$ \$	1,776	\$	2,368
73	\$	2,363		\$	1,418	\$	1,829	\$	2,439
74	\$	2,363		\$	1,418	\$	1,884	s s s	2,512
75	\$	2,363		\$	1,418	\$	1,941	\$	2,587
76	\$	2,363		\$	1,418	\$	1,999	\$	
77	\$	2,363		\$	1,418	\$	2,059	\$	2,665
78	\$	2,363		\$	1,418	\$	2,121	\$	2,745
79	\$	2,363		\$	1,418	\$	2,184	\$	2,827 2,912
									*************************************
Present Value	3								
at age 55: **	\$	290,000		\$	174,000	\$	191,000	\$	99,000

<sup>\*</sup> Ad-hoc COLA increases may be granted at age 65 and later, depending on investment return.

Note Surviving Spouse benefit increases value by 12% for Plan B and 7% for Plan A.

<sup>\*\*</sup> Assumptions: 8.25% Interest and 1983 GAM mortality for males

<sup>\*\*\*</sup> Plan B benefits net of benefit attributable to contributions by employees equal to 8% of pay and accumulated at 8.25% interest per year.